

Tobacco Cessation Program

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Quit to Win



Zyban (Bupropion) for Tobacco Cessation

A growing body of literature is beginning to emerge regarding the safety and efficacy of bupropion as an adjunct to facilitate Tobacco Cessation. Efficacy at 12 months averages 23% and a recent study in *Annals of IM* (135:423-433, 2001) shows that it is safe to use up to 45 weeks of therapy. The primary benefit was a delay in relapse rate; however, tobacco abstinence at 2 years did not differ significantly between treated and placebo groups. The participants received only brief behavioral counseling. Interestingly, the bupropion group gained less weight than the placebo group (3.8 kg v. 5.6 kg, $p=0.002$). Of 784 patients receiving 300mg bupropion SR daily for 7 weeks, 49.5% experienced insomnia. Headache, dry mouth, nausea and restlessness were also noted side effects, but were much less frequent.

At Naval Medical Center, San Diego, we have found that most patients will develop a tolerance to these side effects and that they view these effects as minimal compared to the marked change they experience in their desire (or lack of) to use tobacco! However, if side effects limit the use of Zyban, I recommend a decrease in the dose of medication prior to abandoning therapy completely. Doses between 100mg to 150mg daily have shown 19% abstinence rates at 1 year and are more effective than placebo (12.4%).

Due to bupropion's CNS effect in lowering seizure threshold, it is contraindicated in anyone with a history of seizures, brain tumor, or CVA. It is also contraindicated in patients with anorexia or bulimia, patients receiving other psychiatric medications (unless reviewed with psychiatrist) and in pregnancy.

Zyban is often viewed by patients as a 'magic bullet' that will cure their tobacco addiction. Studies support its efficacy when used alone; however, the best results are achieved when it is combined with behavior modification through an established tobacco cessation program.

Commonly Asked Questions:

How does Zyban work?

The exact physiologic mechanism by which Zyban enhances tobacco abstinence is not known. Nicotine is known to increase dopamine, serotonin, endorphin and norepinephrine release in the CNS. The activation of dopamine is thought to be the common pathway that responds to the stimuli of all addictive substances. By limiting dopamine re-uptake, Zyban increases levels of extracellular dopamine in the CNS and is therefore presumed to be involved in decreasing withdrawal &/or desire for tobacco in nicotine addicted patients.

How should I dose Zyban?

Wellbutrin (which is also Bupropion HCL and is used to treat depression) comes in 75mg & 100mg immediate-release, or 100mg & 150mg sustained-

release pills. The maximum approved dose for anti-depression is 450mg/d. Zyban (bupropion HCL) is sold only in 150mg sustained-release capsules. It is recommended to begin Zyban approximately 1 week prior to the quit-date at 150mg daily for 3 days and then increase to 150mg twice a day. Some of my patients complain of side-effects at the once-daily dose so I do not advise them to increase to 300mg/d until the symptoms diminish. If cravings are abolished on the lower dose, I maintain them at 150mg/d. Often, patients will complain of insomnia after reaching the 300mg/d dose. After ensuring that the patient is limiting caffeine use and exercise prior to sleeping, the second dose of Zyban can be given 8 hours after the 1st dose. Therapy should be maintained for 7-12 weeks after tobacco abstinence.

Guest Editor of this Issue is Dr. Asha Devereaux, CDR, M.C., USN from the Pulmonary Medicine Department at Naval Medical Center San Diego. She is the Medical Advisor and Physician Coordinator for the Tobacco Cessation Programs at NMCS. She may be contacted at:

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